

practice medicine and surgery in the State of California, or in any of the states, who learned the procedure of acupuncture and wished to use it in his practice, could legally do so as long as he observed the ordinary prudence required of all medical practice.

I personally believe that acupuncture has some potential as a technique to relieve pain or even, perhaps, to induce anesthesia for surgical procedures. The truth of the matter is that Western medicine knows very little about acupuncture, and I believe that we should attempt to learn about it. Accordingly, university medical centers are being encouraged to attempt a scientific evaluation of acupuncture treatment. It may even be possible that enabling legislation will be required; however, we are exploring the situation in depth, and no doubt you will be reading more about it in the not too distant future.

I want to make it perfectly clear, that I do not endorse acupuncture at this time. I am sorry that some of the newspaper articles gave this impression.

It is only fair to report to you that a Chinese nurse, also part of the demonstration and who was reported to have had multiple disc disease with two surgeries, tells me that she has had complete relief of her pain for a period of four weeks.

I am immensely pleased that the medical profession here in California has such an open-minded attitude regarding this technique, about which we know very little; nor do we understand the traditional methods of Chinese medical practice.

I should mention that there are no physicians' names that I can give to you in the United States who practice acupuncture, although I have heard rumors that there are such physicians in Los Angeles, New York and Philadelphia. I want to re-emphasize that this is rumor only.

My heart goes out to you, because I cannot do more for you; but if there is any value to the acupuncture treatment, we intend to find out.

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Refer to: Waldron WG: The entomologist and illusions of parasitosis (Information). Calif Med 117:76-78, Aug 1972

## The Entomologist and Illusions of Parasitosis

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The author has been involved in many cases where small to large groups of people in office buildings have said that they were being "bitten" by insects. Subsequent entomological investigations often rule out the presence of biting arthropods as the causative agent. This condition was recently identified for me by the local psychiatric profession as illusions of parasitosis, a phrase which encompasses many environmental and emotional factors. Unlike delusions of parasitosis, which usually affects one person or a family,<sup>1,2</sup> illusions of parasitosis can be evidenced by a heterogeneous group, with as many as 150 people believing that they are being "bitten" or "will be bitten." The unfortunate result of this is a sharp decrease in office efficiency and morale. In most cases, the condition is restricted to women employees. If there is a man in the office, he may grudgingly agree that there is a problem, but usually he is not affected. The people involved will often seek the help of a physician. As with delusions of parasitosis, there may be a "triggering" arthropod such as a flea infestation at home, or thrips in a bouquet of flowers. The person affected may then associate those bites with a situation at the office and transpose the problem from one environment to another. The itching is very readily transmitted to other employees, possibly by discussion, example, suggestion, or awareness. They in turn associate it with their own personal office problems. Those affected may greatly exaggerate their condition to draw attention from a supervisor.

Many times, sympathetic or efficiency-minded supervisors will employ a pest control operator

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to abate the "infestation." Experienced exterminators first check for the presence of an offending arthropod and, finding none, may treat the room or rooms (with the knowledge of the employer that it is unnecessary) simply to mollify the complainants. In some instances this technique works—at least temporarily. In most cases, however, the problem remains because the environmental conditions have not been changed.

The following are some environmental factors noted by the author as appearing to influence the possibility of illusions of parasitosis in an office. One or more may contribute to a situation:

- Crowded or cluttered working conditions.
- Routine, dull, or repetitious clerical work.
- The feeling of too much pressure.
- Too warm or too cold, perhaps owing to lack of proper air conditioning or central heating.
- Old or drab equipment and surroundings.
- Sedentary function.
- Handling or being exposed to foreign materials which might irritate the skin.

A typical request for help from an entomologist is for advice on the abatement of "telephone cable lice or fleas" or a "paper louse" infesting an office. In all cases it is necessary first to eliminate the possibility that an arthropod is the real cause. A few questions put to the complainants often help to clarify the issue:

- *Are you being bitten at home after changing clothes or showering?* The answer is usually negative; in other words, the problem is at the office.

- *What part of the body is being bitten?*
  - (a) Exposed parts of body, for example, hands, back of neck, forearm, face, legs?
  - (b) Front or back of lower leg, or both?
  - (c) How far up the leg?
  - (d) Covered or clothed parts of body?

- *Did you see the bug?* In many cases the affected persons indicate the insect is too small to be seen; but, individuals "know" they are being bitten by something.

The following are a few of the author's case histories which may graphically describe the different types of problems involved:

*Case 1.* Several women keypunch operators complained of being bitten on the forepart of their ankles and lower legs. Itching was confined to these areas. No arthropod was involved al-

though fleas were suspected. Further investigation revealed that a fan directly in front of the machines blew small bits of tabulating cards, a side result of the keypunch operation, onto the legs of the women. The small pieces stuck into the mesh of their hose and set up a slight irritation when the leg moved. The girls scratched the area—and imagination, evidently, did the rest.

The fan was removed and the problem abated.

*Case 2.* Eight women worked at desks confined in a clutter of filing cabinets, business machines, and other equipment in a small windowless, drab room. The air was warm and stuffy. There was no unanimity among the affected employees as to the location of the bites. Only one woman had what appeared to be bites, and they were located around her ankles. Questioning disclosed that she had a recent flea infestation at her home but it had been abated. No other arthropod was involved.

A suggestion was made to the employers to rearrange the room, paint it, then decorate it with some attractive pictures and also to provide for better ventilation. This was done the following week-end and the itching and complaints ceased.

*Case 3.* Approximately 150 employees worked in a spacious, modern, and attractively decorated room. The employees, most of whom were women, took airline flight reservations by telephone. Observations of the entire operation showed a constant need for accuracy in dates, times, flights, and changing flight schedules—hence a feeling of pressure. In addition, at the front of the room, facing all the employees, was a darkened room attended by three people who monitored incoming calls and watched the employees.

The complaints were unanimous in that all women employees felt a tingling sensation and a slight "pulling" of their hose just above the ankle at the front part of the leg. Some felt "itchy" on other parts of their body. No men were affected. The morale and effectiveness of the employees was very low at the time of the investigation.

The company had tried to have a pest control operator treat the premises, but treatment had been refused because no arthropod could be found. However, all afflicted personnel still maintained that there was an infestation of "cable lice."

The employees worked in long, continuous

rows. At the front part of the desk-like rows, immediately in front of their legs as they sat was an unshielded telephone cable. Apparently a static electric charge involving the women's nylon hose, the cable, and possibly the linoleum tile, was created and caused the pulling sensation of the hose.

Two suggestions, shield the cable and to keep the light on in the monitoring booth, were accepted and the problem abated.

There are no such creatures as cable lice, cable fleas, or paper lice. There is a limited array of arthropods which bite or sting people and these are predictable by their habitats, and to a certain extent by geographic distributions as well as defined habits and needs. The entomologist's role with illusions of parasitosis is first to attempt to determine what is real. After ruling out biting insects, he may try to find some other causative agent or agents in the immediate environment.

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#### CLINICAL CARDIOLOGY SERIES

## Cardiac Tamponade and Constrictive Pericarditis

### Part I—Diagnosis

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*Material Supplied by the American  
Heart Association*

The intrapericardial pressure in normal persons is subatmospheric. Cardiac tamponade exists when the intrapericardial pressure is appreciably increased by fluid. Its severity depends upon the rate of accumulation and the volume of peri-

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cardial fluid. Important causes include trauma, infection and ruptured aortic aneurysm or myocardial infarction.

Equal compression of all cardiac chambers by the fluid explains the clinical picture: elevated venous pressure, pulmonary congestion, hypotension and a quiet heart. One or two hundred milliliters of fluid accumulated rapidly can cause tamponade, as in trauma. In infectious and malignant effusions the onset, although less acute, may still be rapid. If an effusion collects over many days or weeks, several hundred milliliters may gather before tamponade ensues.

In extreme cases, clinical examination discloses impaired cerebral function, pallor, sweating, and impalpable or weak radial pulses. Cerebral symptoms are less prominent with milder tamponade but the patient may note chest discomfort and dyspnea.

Pulsus paradoxus, an abnormal inspiratory fall in arterial pressure, is almost invariable with tamponade. The pulse diminishes or entirely disappears during each inspiration. Pulsus paradoxus may be difficult to elicit under three circumstances: profound hypotension, mild tamponade, and tachypnea. When the radial pulse is impalpable, paradoxus may be elicited from the femoral pulse. To appreciate pulsus paradoxus in mild cases, it may be necessary to have the patient breathe as deeply and slowly as possible without straining at end inspiration or expiration. However, when the aim is to measure the severity rather than simply detect pulsus paradoxus, respiration should be maintained as normal as possible, because hyperventilation exaggerates pulsus paradoxus. Blood pressure is measured with a cuff, releasing the pressure as slowly and evenly as possible. Initially, systolic sounds are audible only during expiration, but as cuff pressure falls, a point is reached when the sounds are heard throughout the respiratory cycle. The pressure difference between these two points estimates pulsus paradoxus.

Elevated venous pressure is best observed with the thorax elevated, frequently to 90 degrees. Venous pulsations are visible inferior and anterior to the ear and display a single slow expansion followed by a rapid collapse synchronous with the carotid pulse. Normal inspiratory variation and fall in venous pressure is often maintained. Precordial activity is absent or diminished, but if the apex beat is palpable cardiac